Economic Contribution of the Film and Television Industry

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Report by Access Economics Pty Limited for

AFACT

Commercial-in-Confidence

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ABS	Australian Bureau of Statistics
FTE	Full time equivalent
GDP	Gross domestic product
GOS	Gross operating surplus
IO	Input Output Tables

Executive Summary

Access Economics has estimated the economic contribution of the film and television industry to the Australian economy. The total value added contribution of the sector is about $6 billion and 49,000 FTE workers. This contribution considers key economic variables such as employment and value added contributed by the industry. The economic contribution is broken into sectors of the film and television industry.

The total contribution to GDP of the film and television industry to the Australian economy is outlined in Table i, showing the split between the direct and indirect contribution. Of the total contribution to GDP, just over $5.1 billion was in direct value added, with 40,696 persons directly employed.

The total value added of the film and television industry to the Australian economy in 2009-10 is estimated to be $6.1 billion, with $2.8 billion in labour income and $3.4 billion returned as gross operating surplus. In total, approximately 48,667 persons were employed on a full time equivalent basis. The total value added is net of $111 million in production subsidies paid by all levels of government in Australia.

Table i: Total economic contribution, $M, 2009-10

Sector	Gross operating surplus	Labour income	Value added	Employment (FTE)
Direct contribution	**2,789.2**	**2,455.5**	**5,133.3**	**40,696**
Production	276.0	688.0	852.6	10,166
Distribution	605.4	227.2	832.6	2,652
Free to air TV	1,213.7	680.2	1,893.9	5,505
Pay TV	247.3	296.9	544.1	3,514
Exhibition	177.5	212.5	389.9	6,305
Retail	92.7	169.3	262.0	6,083
Rental	174.4	178.9	353.3	6,426
Online	2.1	2.7	4.8	42
Indirect contribution	**666.5**	**337.9**	**1,004.3**	**7,971**
Total contribution	**3,455.6**	**2,793.4**	**6,137.6**	**48,667**

Source: Access Economics estimates

Total value added of the Australian film and television industry has grown 5.1% between 2006-07 and 2009-10. However, total employment related to the industry has fallen by 2.55% in the same period (Table ii).

Table ii: Economic contribution in 2006-07 and 2009-10, $M (2009-10 prices)

Economic contribution	Gross operating surplus	Labour income	Subsidy	Value added	Employment (FTE)
2006-07	3,282	2,665	108	5,839	49,941
2009-10	3,455	2,793	111	6,137	48,667
Change (%)	5.29	4.82	3.17	5.11	-2.55

Source: Access Economics estimates

Access Economics

1 Introduction

Access Economics was commissioned by the Australian Federation Against Copyright Theft (AFACT) to assess the economic contribution of the film and television industry to the Australian economy.

The Australian film and television industry comprises an array of businesses and services across Australia. The economic analysis apportions the economic contribution by the following industry sectors:

- production;
- distribution;
- exhibition;
- free to air TV;
- subscription TV;
- retail;
- rental; and
- online sales.

The economic contribution study measures the direct contribution to GDP of the Australian film and television industry, as well as employment associated with the industry. Indirect and flow-on contributions to other sectors of the economy will also be quantified using an input-output (IO) framework.

A further aim of this report was to measure the contribution of the digital film and television sector.

1.1 Framework for the analysis

Chapter 2 outlines the findings on the contribution modelling, broken down by industry sector. The chapter also outlines the contribution to the states and territories and the contribution of the digital production sector.

Chapter 3 provides a description of the industry sectors, and includes sales, revenue and expenditure data for each of these sectors.

Appendix A provides detail of the methodology and limitations of economic contribution studies.

Appendix B outlines the assumptions made to estimate the economic contribution, and provides more detail on data sources and how the modelling was conducted.

1.2 Economic contribution studies

The direct economic contribution to GDP of the Australian film and television industry is the value added created by labour and capital inputs employed directly by the industry. Direct

activities related specifically to the film and television industry include the making of content for film and television, distributing the content, and consumer use through watching, buying or renting the content.

The indirect contribution is a measure of the demand for goods and services produced in other sectors of the economy as a result of the direct economic activity in the film and television sector. The size of this flow-on activity is dictated by the extent of linkages with other sectors of the economy. Estimation of the indirect contribution is undertaken in an input-output framework using Australian Bureau of Statistics input-output tables (2008).

The total economic activity generated by the film and television industry is the sum of the direct and indirect components. Both the direct, indirect and total contributions are reported as value added, gross operating surplus and employment.

Further detail on the approach used to measure the economic contribution of the Australian film and television industry is provided in Appendix A.

1.3 Methodology of the economic contribution

The methodology of the economic contribution of the film and television industry to the Australian economy remains the same as the previous economic contribution of the industry conducted in March 2009.

This report updates key data in the industry to estimate the economic contribution of the industry in 2009-10.

ABS data for the production, television exhibition, distribution and rental sectors were utilised. However, these data are based on old information and as such has been updated using growth rates estimated by Access Economics.

These growth rates have been estimated using data from sources such as Screen Australia, Motion Picture Distributors Association of Australia (MDPAA) and PricewaterhouseCoopers Entertainment and Media Outlook 2011. Access Economics also conducted interviews with a number of industry sector contacts to improve our understanding of the recent changes in the industry and the future directions of the industry.

2 Economic contribution of the Australian film and television industry

The following is a discussion of the direct, indirect and total economic contribution of the Australian film and television industry disaggregated by sector.

2.1 Expenditure

Table 2.1 shows the estimated gross output of the Australian film and television industry in 2009-10, arising from the expenditure attributable to the industry. The total gross output of the industry is approximately $20.2 billion, comprising $17.3 billion in direct gross output.

The direct gross output is split into sectors of the Australian film and television industry. The free to air television sector has the highest gross output.

Table 2.1: Gross output, $M, 2009-10

Sector	Gross output
Direct gross output	**17,326.1**
Production	2,222.6
Distribution	3,255.3
Free to air TV	4,517.2
Pay TV	3,320.1
Exhibition	1,705.6
Retail	1,527.5
Rental	761.3
Online	16.4
Indirect gross output	**2,834.0**
Total gross output	**20,160.1**

Source: Access Economics estimates

2.2 Direct Economic contribution

The direct economic contribution captures the value added created by labour and capital inputs. Value added (output after deducting the value of intermediate inputs) is the most appropriate measure of an industry's economic contribution to GDP. Industry value added can be calculated directly by summing the returns to the primary factors of production; labour and capital; as well as production taxes less subsidies. The value added of each industry in the value chain can be added without the risk of double counting across industries.

Gross operating surplus (GOS) is a measure used in the national accounting framework to assess the returns to capital. It essentially represents the operational profits of the industry. Financial aspects are not included in measuring GOS.

The direct economic and employment contribution of the Australian film and television industry in 2009-10 is shown in Table 2.2, disaggregated by sector. The economic contribution totals approximately $5.1 billion in value added, with almost $2.8 billion returned as gross operating surplus and $2.4 billion as labour income. Approximately 40,700 full time equivalent workers are directly employed across the industry. The total value added is net of $111 million in production subsidies paid by all levels of government in Australia.

Table 2.2: Direct economic contribution, $M, 2009-10

Sector	Gross operating surplus	Labour income	Value added	Employment (FTE)
Production	276.0	688.0	852.6	10,166.8
Distribution	605.4	227.2	832.6	2,652.4
Free to Air TV	1,213.7	680.2	1,893.9	5,505.5
Pay TV	247.3	296.9	544.1	3,514.2
Exhibition	177.5	212.5	389.9	6,305.4
Retail	92.7	169.3	262.0	6,083.1
Rental	174.4	178.9	353.3	6,426.4
Online	2.1	2.7	4.8	42.5
Direct contribution	**2,789.2**	**2,455.5**	**5133.3**	**40,696.3**

Source: Access Economics estimates

The online direct value added of $4.8 million is contributed by the $16.4 million in online movie expenditure in Australia in 2009-10. This expenditure does include some turnover generated by Australians in websites that are located outside of Australia.

2.3 Indirect and total economic contribution

The direct contribution of the Australian film and television industry captures the value added created by labour and capital inputs. However, intermediate inputs generate flow-on or indirect contribution via the activity created in other sectors. The size of this flow-on activity is dictated by the extent of linkages with other sectors of the economy. To measure the Australian film and television industry's economic contribution, Access Economics use analysis of the input-output structure of the economy.

The input-output structure of the economy is estimated by the Australian Bureau of Statistics with the published input-output tables reporting the inputs and outputs of specific sectors of the economy. By utilising these, Access Economics can calculate the relationship between the total and direct economic contribution of the industry. The ratio of the total to direct activity is referred to as a sector multiplier. Table 2.3 outlines the motion picture, radio and television services multipliers estimated within the input-output table framework. The first panel outlines the gross output multipliers and the second outlines the ratio of the total to direct effect.

Table 2.3: Motion picture, radio and television services multipliers

Gross output multiplier	
Gross Output	2.28
Value Added	0.46
Labour Income	0.84
Employment	8.16
Ratio of total to direct contribution	
Gross Output	2.28
Value Added	2.87
Labour Income	2.85
Employment	2.82

Source: ABS cat. No. 5209.0, Access Economics

The gross output multipliers use direct gross value added to estimate the total value added, labour income and gross output (these concepts are discussed in greater detail in Appendix A).

The indirect contribution is estimated using these multipliers minus the direct contribution.

The indirect contribution is outlined in Table 2.4. Only the production sector of the Australian film and television industry creates an indirect contribution through the flow on demand generated by this sector. The production sector is estimated to have generated an indirect value added of $1,004 million to the Australian economy, with an additional 7,971 workers indirectly employed and a wage contribution of $338 million.

Table 2.4: Indirect economic contribution, $M, 2009-10

Sector	Gross operating surplus	Labour income	Value added	Employment (FTE)
Production	666.5	337.9	1,004.3	7,971.4

Source: Access Economics estimates

The total economic contribution of the film and television industry to the Australian economy is outlined in Table 2.5, showing the split between the direct and indirect contribution. The total economic contribution to GDP (value added) is estimated to be approximately $6.1 billion in 2009-10, with $2.8 billion being paid in wages, $3.4 billion returned as gross operating surplus and 48,667 persons employed on a full time equivalent basis.

Table 2.5: Total economic contribution, $M, 2009-10

Sector	Gross operating surplus	Labour income	Value added	Employment (FTE)
Direct	**2,789.2**	**2,455.5**	**5,133.3**	**40,696**
Production	276.0	688.0	852.6	10,166
Distribution	605.4	227.2	832.6	2,652
Free to Air TV	1,213.7	680.2	1,893.9	5,505
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Indirect	**666.5**	**337.9**	**1,004.3**	**7,971**
Total	**3,455.6**	**2,793.4**	**6,137.6**	**48,667**

Source: Access Economics estimates

2.4 Comparison to other industries

In comparison to other industries the direct value added from the Australian film and television industry appears large. The industry's contribution to GDP is comparatively greater than that from the sports and recreation industry and the private tertiary education industry, as highlighted in Table 2.6. The Australian film and television industry is also larger than the non-metallic mineral mining and quarrying industry which has an estimated value added of $2.0 billion; as well as the internet service provider industry with a value added of $1.3 billion.

In contrast the film and television industry is smaller than the accommodation industry, with an estimated value added of $7.0 billion and the coal mining sector with $22.5 billion.

Table 2.6: Contribution of other industries, $M, 2009-10

Sector	Value added ($M)
Coal mining	22,533
Accommodation	7,028
Exploration and other mining support services	4,956
Sports and recreation activities	3,768
Fuel retailing	2,688
Tertiary education (private)	2,533
Non-metallic mineral mining and quarrying	2,031
Internet service providers, web search portals and data processing services	1,250
Gas supply	990

Source: ABS cat. no. 8155.0

2.5 Digital contribution

The digital contribution of the film and television industry is estimated to be about $4.1 billion or 79% of the total direct contribution in 2009-10. The highest digital sector contribution comes from the free-to-air television sector with $1.37 billion in value added, and 74% of the total value added by the film and television industry. This is based on Australian Government data on the proportion of houses that have converted to the digital platform.

Table 2.7: The digital contribution, $M, 2009-10*

	Digital (%)	Value added	Digital value added
Production	90.0	852.6	767.3
Distribution	76.6	839.1	642.5
Free-to-air TV	74.0	1,852.7	1,371.0
Pay TV	100.0	562.9	562.9
Exhibition	22.7	397.2	90.0
Retail	100.0	262.0	262.0
Rental	100.0	353.3	353.3
Online	100.0	4.8	4.8
Total	78.6	5,124.5	4,068.8

Source: Access Economics estimates,

* Production is based on Access Economics estimates, Free-to-air TV based on *Digital Tracker* April to June 2010, DBCDE, Retail and rental based on AVSDA statistical data, Exhibition is based on MPDAA data, Pay TV is based on Access Economics estimates, note in *Statistical Snapshot 2009* DBCDE estimated at October 2006 that 90% of Pay TV was digital. For the distribution sector Access Economics estimates based on the proportions of the sectors it supplies.

The high proportion of digital retail and rental sales reflect the ubiquitous role, both the DVD and, more recently, Blu-ray have played in the sector.

2.6 State contribution

Table 2.8 shows the economic contribution of Australia's film and television industry disaggregated by state. NSW is the highest contributor to economic activity in the industry, followed by Victoria and Queensland. This is probably because these states contain the majority of production and distribution activity in the industry.

Table 2.8: Economic contribution by states, $M, 2009-10

Sector	Gross operating surplus	Labour income	Value added	Employment (FTE)
New South Wales	1481.5	1181.5	2623.8	20751.7
Victoria	766.8	621.8	1358.9	10812.5
Queensland	639.5	508.3	1122.4	8945.9
South Australia	184.6	154.7	334.5	2638.2
Western Australia	242.2	206.1	437.1	3484.0
Tasmania	48.7	41.8	90.1	703.0
Northern Territory	23.5	19.9	43.3	337.8
Australian Capital Territory	68.9	59.2	127.6	994.5
Australia	3455.6	2793.4	6137.6	48667.7

Source: Access Economics estimates

2.7 Taxes

Approximately $1.95 billion in taxes paid to government is included in the value added outlined above. Corporations tax and income tax from industry contribute $531 million and $467 million respectively. The GST paid by consumers was almost $966 million Australia-wide, with $409 million in GST paid in NSW and just less than $215 million paid in Victoria.

Table 2.9: Tax payments by the film and television industry, $M, 2009-10

Tax category	Tax paid
Corporations tax	527.6
Income tax	467.5
GST	954.2
New South Wales	*405.1*
Victoria	*212.2*
Queensland	*174.4*
South Australia	*52.3*
Western Australia	*69.4*
Tasmania	*14.0*
Northern Territory	*6.7*
Australian Capital Territory	*19.9*
Total	1949.3

Source: Access Economics estimates

Of the GST payments $139 million was paid by consumers purchasing DVDs in the retail sector and $158 million was paid by film goers in the exhibition sector. It is worth noting that the larger tax paid by the sector is, in part, due to the improved financial performance of the sector in the current reference year. See Appendix B for more discussion on the revised tax treatment in the sector.

2.8 Previous contribution

The economic contribution of the Australian film and television industry in 2006-07 is updated to 2009-10 prices for comparison to the current economic contribution. This is shown in Table 2.10.

Table 2.10: Total economic contribution, $M, 2006-07 (2009-10 prices)

Sector	Gross operating surplus	Labour income	Subsidy	Value added	Employment (FTE)
Direct	2,680	2,335		4,906	38,802
Production	272	678	108	841	10,616
Distribution	494	186		680	2,180
Free to Air TV	1,330	745		2,075	6,033
Pay TV	186	223		409	2,640
Exhibition	156	187		344	5,890
Retail	86	158		244	5,697
Rental	155	159		314	5,745
Indirect	603	329		932	11,140
Total	3,282	2,665	108	5,839	49,941

Source: Access Economics estimates

The total value added of the Australian film and television industry has grown 5.11% between 2006-07 and 2009-10. However, employment in the industry has fallen by 2.55% in the same period. Notably the fall in employment is largely due to a fall in indirect employment indicating that industries demand created by the film and television industry for suppliers does not lead to as many jobs as previously. Gross operating surplus and labour income have also grown 5.29% and 4.82% respectively over the period.

Table 2.11: Economic contribution in 2006-07 and 2009-10, $M (2009-10 prices)

Economic contribution	Gross operating surplus	Labour income	Subsidy	Value added	Employment (FTE)
2006-07	3,282	2,665	108	5,839	49,941
2009-10	3,455	2,793	111	6,137	48,667
Change (%)	5.29	4.82	3.17	5.11	-2.55

Source: Access Economics estimates

3 The Australian film and television industry

This chapter provides an overview of the activities undertaken in the sectors of the Australian film and television industry. It also highlights the economic data relevant to the calculation of value added, including financial data as well as comparisons of key performance indicators over time.

3.1 Production

The production sector of the Australian film and television industry produces content for both film and television viewing. It forms the first link of the value added chain which makes up the industry. Table 3.1 shows spending in the production sector in Australia from 2006-07 to 2009-10. In 2009-10 there were 73 Australian produced films and 7 foreign films with spending in Australia. The production spending on these productions was $551 million and $170 million respectively.

Table 3.1: Production spending in Australia

(Spend is in $A million)	Australia		Foreign		Total	
	No.	Spend in Australia	No.	Spend in Australia	No.	Spend in Australia
2006-07	75	498	11	134	86	632
2007-08	85	441	8	239	93	680
2008-09	78	694	8	3	86	698
2009-10	73	551	7	170	80	722

Source: Screen Australia

3.1.2 Digital production

The digital production sub-sector comprises all components of production that use digital technology. Almost all film and television production in Australia will have a digital component and most movies are now available in digital format as well as the traditional 35-millimetre film. Access Economics conducted an interview with Australian digital visual effects company, Animal Logic, to gather more information on the digital production sector.

Case study – Animal Logic

Animal Logic is a major player in digital production in Australia. Based in Sydney the firm has three primary streams of production demand from across the entertainment industry; television commercials, visual effects for feature films and full animation projects.

The production of commercials makes up approximately 10-15% of Animal Logic's work, primarily commissioned by advertising agencies. Commercials use a steady stream of resources and each commercial takes between a couple of weeks and a few months to produce.

Visual effects for feature films comprise a further 15-25% of the workload, although there is more variation in this sector. Feature film work is the most competitive sector, with high competition stemming from the US, UK and Canada. The recent increase in the Australian dollar has made this sector even more competitive. Digital production is very labour intensive, however due to the highly skilled nature of the work there is little competition from the developing countries, with the exception of India which is slowly emerging as a satellite workforce.

The feature-length animation projects make up over 50% of the workload and Animal Logic typically works on one major project at a time. These projects may involve large $100 million plus budgets and typically run for three or more years, necessitating a workforce of approximately 50 persons at the beginning, peaking at around 300 persons towards the end of the project. Animal Logic's Australian total employment ranges from between 250 to 550 people, depending on project demand and if an animation project is underway.

The animation projects are typically conducted in conjunction with a movie studio. Animal Logic's most recent full animation was produced in conjunction with Warner Bros. *Legend of the Guardians* is a 3D computer animated fantasy-adventure film.

Across all sub-sectors Animal Logic are becoming increasingly involved in building greater in-house capabilities such as the development of creative intellectual property as well as technical intellectual property. This enables greater demand management and less reliance on servicing supply. Animal Logic also focuses on the training and development of skilled workers in the digital production sector.

This is crucial given the constantly changing environment and the variance in demand for employees and helps ensure the longevity of the sector in Australia. Government incentives currently assist the Australian digital production sector, helping them to remain competitive overseas. It is important that these remain relevant to the constantly changing sector.

Animal Logic has evolved according to changes in technology and consumer demand. The research and development team comprises 20 people involved with upgrading to new software and tools including 3D technology.

3.2 Distribution

The distribution sector is the intermediary which provides an avenue between the producers of the viewing material and the retail, rental and film outlets. The 6 key distributors in the Australian film sector are:

- Roadshow;
- Sony Pictures Releasing International;
- Twentieth Century Fox Film Distributors;
- Walt Disney Studios Motion Pictures Australia (formerly Buena Vista International and current distributor of DreamWorks);
- Paramount Pictures Australia; and
- Universal Pictures International Australasia.

Warner Bros Entertainment Australia also distributes films in Australia under a long-standing joint venture with Village Roadshow Ltd. Roadshow is the only Australian-owned distributor to work at the scale of the US studio distributors. However, other independent film distributors in Australia include:

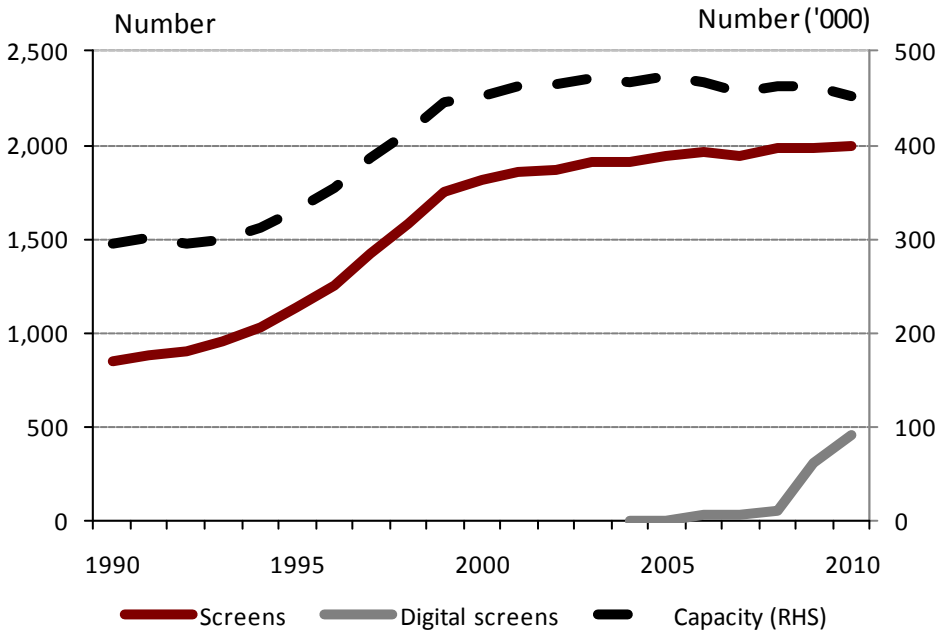
- Icon Film Distribution (owner of Dendy);
- Hopscotch Films;
- Palace Films;
- Transmission Films;
- Madman Entertainment;
- Pinnacle Films; and,
- Hoyts Distribution.

3.3 Exhibition

The exhibition sector comprises businesses involved in the display of films in cinemas. In Australia, the sector has a large proportion of independent exhibitors representing over 30% of the screens, while over half of the market is dominated by four large players with more than 20 cinemas and over 185 screens each – Hoyts, Greater Union, Village and Birch Carroll & Coyle. All four of these brands are Australian.

Since 1980, the number of cinema screens in Australia has grown 140% to a total of 1,994. Growth in capacity has kept pace with that of screens (Chart 3.1). An important development in the film and television industry has been the shift to digital technology in film production, distribution and exhibition. In the exhibition sector this can be seen in the rise of the number of digital screens. In 2006 there were just 27 digital screens, while in 2010 there were 452, accounting for about 23% of all screens. Digital screens represent the latest cinema projection technology (as opposed to traditional 35-millimetre film), and cost between $100,000 and $150,000.

Chart 3.1: Number of cinema screens and cinema capacity



Source: Screen Australia

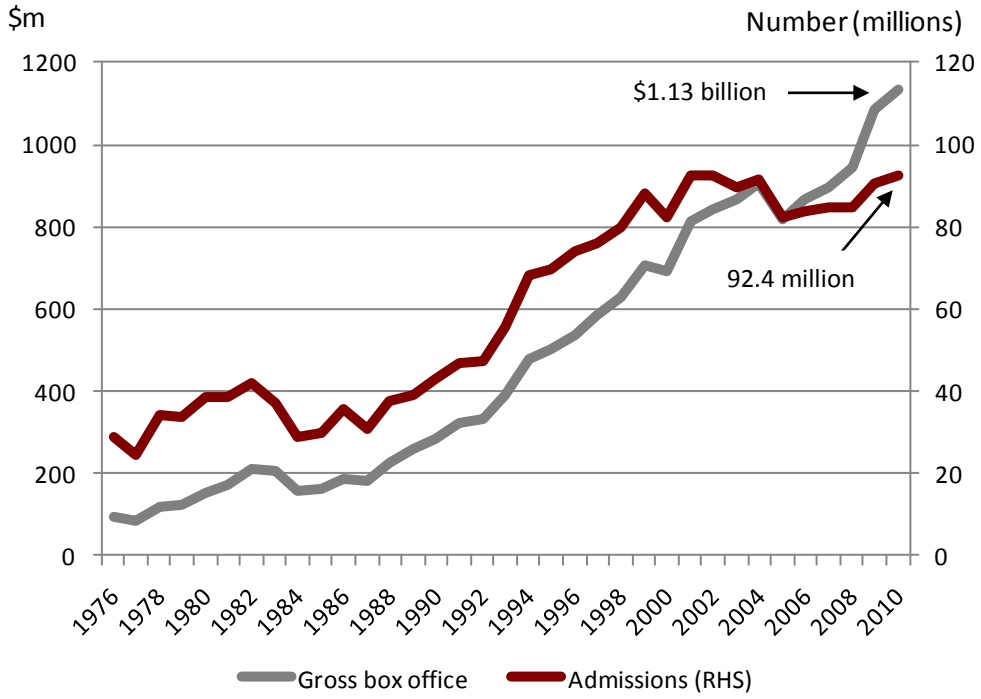
MPDAA figures suggest that currently (at August 2011) there are approximately 780 digital screens in Australia with about 690 3D screens.

The price of installing digital screens is typically borne by the exhibitor who benefits from the screen because the distribution of the digital film to the cinema is faster and the screens may attract a larger audience. The screens also provide the exhibition sector with the potential to offer alternative material outside of peak times for movies, for example streaming content such as sporting grand finals into the cinema.

Distributors also benefit through lower production, distribution and film transportation costs than those currently incurred using 35 millimetre film. Distributors and exhibitors continue to discuss the optimal split in financing the conversion to digital screens. It is likely that the conversion of exhibition screens to digital format will continue in the next decade.

Chart 3.2 shows that there has been a strong increase in both cinema admissions and box office sales in Australia since the late 1970s. Gross box office sales have grown faster than cinema admissions in recent years, partly as a result of ticket sales to the more expensive 3D films and to premier and gold class movie sessions. Cinemas are providing a higher quality of experience and service than previously offered and many consumers are willing to pay a higher ticket price as a result.

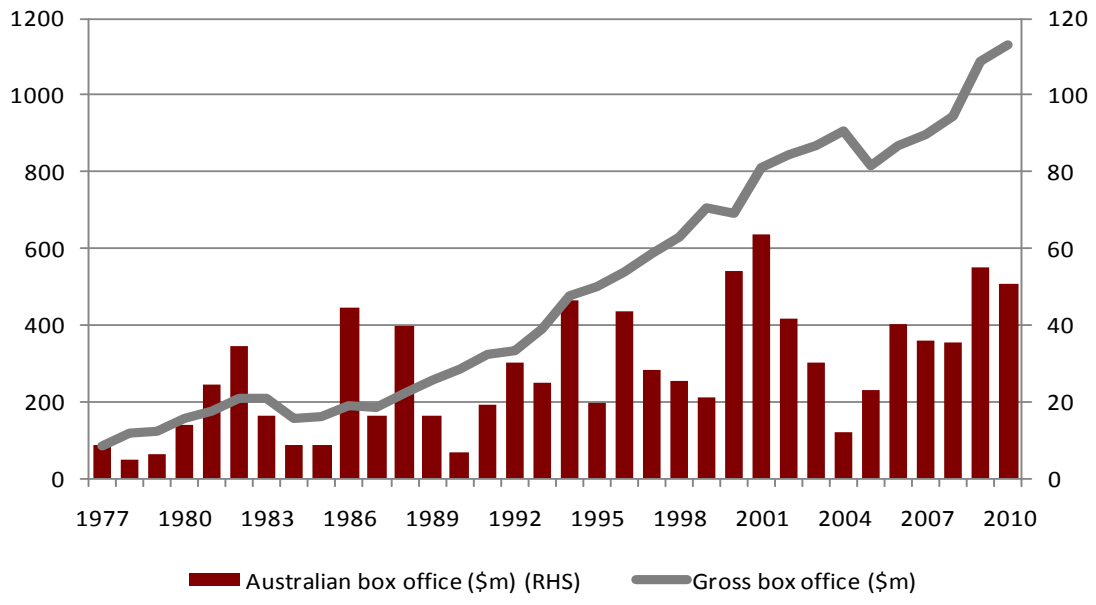
Chart 3.2: Cinema admissions and Australian gross box office



Source: MPDAA

In 2010, Australian cinemas grossed over $1.1 billion in total box office revenue – the highest box office result on record. 50 films were classified as Australian films, earning $50.6 million over the year (Chart 3.3). This represented 4.5% of total box office earnings, slightly higher than the five year average of 4.4%.

Chart 3.3: Box office for Australian feature films



Source: MPDAA

During the year, the top five Australian films by box office accounted for over 70% of the total box office earnings by Australian films in 2010.

Table 3.2 shows box office spending in Australia compared with Asia/Pacific and global spending. Australia's box office spending has grown each year since 2005.

Table 3.2: Box office spending

$A million	2006	2007	2008	2009	2010
Australia	1,191	1,232	1,299	1,497	1,561
Asia/Pacific	7,683	8,093	8,527	9,093	10,388
Global	28,573	29,726	30,757	34,022	36,121

Source: PriceWaterHouse Coopers, 2011, Outlook Australian Entertainment and Media 2011-2015

Table 3.3 shows the cinema advertising market in Australia over the past 5 years. The cinema advertising market experienced a sharp drop in advertising revenue in 2009, but recovered some of the lost ground in 2010.

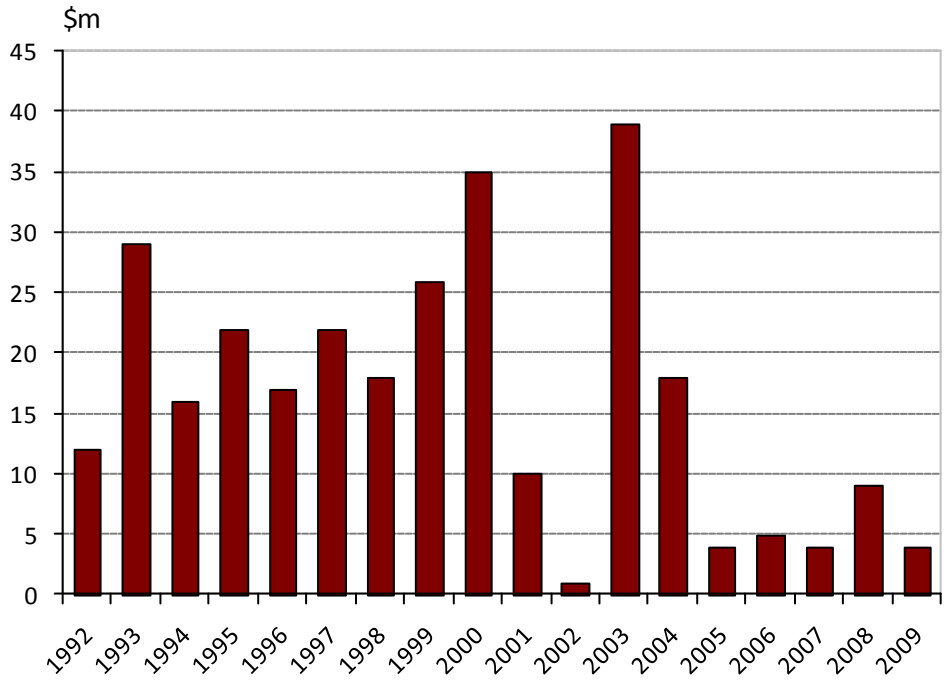
Table 3.3: Cinema advertising market

$A million	2006	2007	2008	2009	2010
Australia	86	93	96	89	93

Source: PriceWaterHouse Coopers, 2011, Outlook Australian Entertainment and Media 2011-2015

Chart 3.4 shows that royalty earnings for Australian cinema exports declined in recent years, from a peak of $39 million in 2002-03 to $4 million in 2005-06. Export value has remained fairly stable since 2005-06. The US accounts for 73% of Australia's cinema royalty exports.

Chart 3.4: Cinema royalty exports (financial year)



Source: Screen Australia, ABS 5302.0

Note: methodology differs from FY92 – FY05 data, thus any comparisons between figures before and after 2005/06 should be made with caution.

3.4 Television

The television sector is divided into free-to-air and subscription television. The main difference between the two is the way in which revenue is earned, with free-to-air receiving income predominantly from advertising, while subscription television raises its revenue from subscription fees.

Table 3.4 provides a comparison of income between free-to-air television and subscription television in Australia. The data clearly highlight the significant growth in the subscription television sector in recent years, albeit from a lower base. However, 2010 saw a strong increase in advertising spending for free-to-air television.

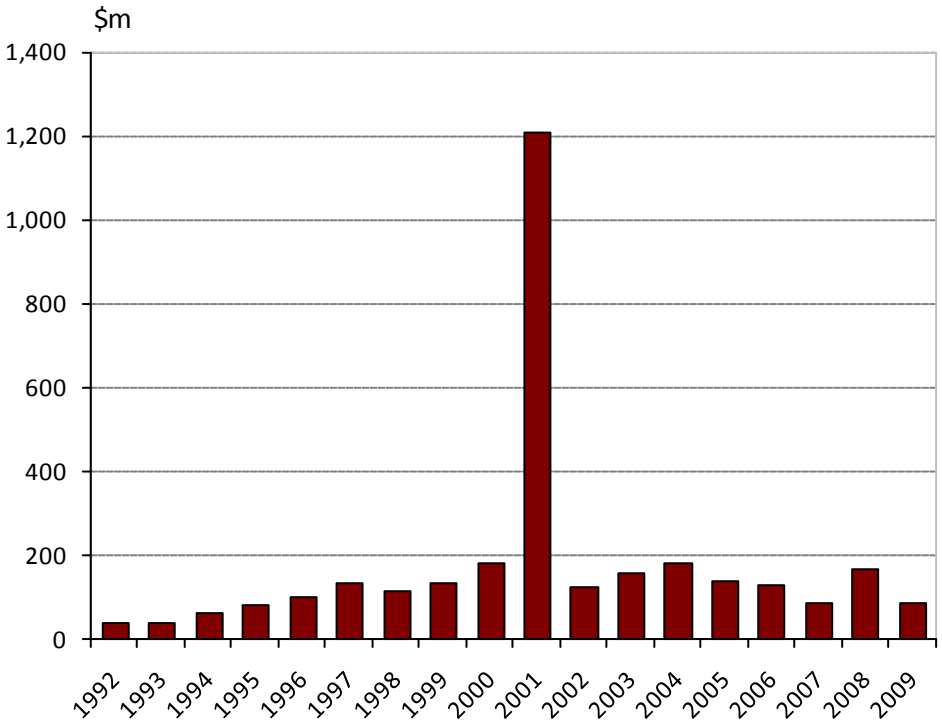
Table 3.4: Australian television income

	2006	2007	2008	2009	2010
Free-to-air television income from advertising	3,208	3,475	3,412	3,151	3,513
% change		8.3%	-1.8%	-7.6%	11.5%
Subscription television total income	1,689	2,051	2,443	2,661	2,779
% change		21.4%	19.1%	8.9%	4.4%

Source: PriceWaterHouse Coopers, 2011, Outlook Australian Entertainment and Media 2011-2015

Chart 3.5 shows television royalty earnings between 1992 and 2009. Television earnings were particularly high in 2000-01 as a result of the audiovisual royalties paid to the Sydney Organising Committee for the Sydney Olympic Games. In 2009 television royalties dropped from the previous year.

Chart 3.5: Television royalty exports (financial years)



Source: Screen Australia, ABS

3.4.2 Free-to-air television

Australia's free-to-air television sector is comprised of two government-funded national networks (SBS and ABC), three commercial networks (Seven, Nine and Ten, as well as regional affiliates) and a number of small community groups which operate independently in discrete markets (for example, QCTV in Queensland and TVS in Sydney).

As with other sectors of the film and television industry, there has been a recent shift towards the adoption of digital technology in the television sector. While all free-to-air providers still provide services via analogue transmission, Australia is currently under a timeline to switch over to digital television. In a 2007 survey of Australian households, Australian Communications and Media Authority (ACMA) reported that 41.8% of households indicated they received digital free-to-air television, with picture quality the leading reason cited by survey participants for adoption. Of non-adopters, 15% had not heard of digital free-to-air television.

Table 3.5 provides an overview of the expenditure on Australian free-to-air television programs. In the 2008-09 financial year, $950 million was spent on local programs by commercial free-to-air broadcasting services in Australia, of which spending on sport was the

largest ($330 million) followed by variety ($177 million), and other light entertainment and drama ($132 million each).

In addition, Australian commercial free-to-air broadcasting services imported $430.3 million worth of content in the 2008-09 financial year, up from $398.7 in the previous year. Program spending comprised 40% of total operating costs in the 2008-09 financial year.

Table 3.5: Value of Australian free-to-air television program expenditure, $M

	FY07	FY08	FY09
Drama	96.2	116.3	132.1
Children's drama	12.3	15.5	12.7
Other children's	12.1	11.0	9.8
News & current affairs	166.9	121.9	111
Documentaries	9.0	13.4	26.7
Sport	188.3	305.7	330.8
Variety	168.7	167.6	176.7
Other light ent.	122.4	162.8	132.3
Other programs	14.4	13.8	25.6
Unspecified Australian	0.0	0.0	-7.1
Total Australian	**790.4**	**928.1**	**950.6**

Source: ACMA

Table 3.6 shows the financial performance of the free-to-air television sector. The number of stations has not altered much in the past few years. The 55 commercial free-to-air television stations are owned by just seven networks, making the market highly concentrated.

Service revenue dropped in 2008-09 due to a decrease in both sales of air time and other revenue. Service expenditure also decreased between 2007-08 and 2008-09.

Table 3.6: Financial performance of free-to-air television

	FY05	FY08	FY09
Number of stations	53	55	55
Service Revenue ($m)	**4119.3**	**4159.3**	**3784.4**
Sale of air time	3573.9	3784.4	3510.3
Other revenue	545.4	374.9	274.2
Service Expenditure ($m)	**3542.4**	**3841.3**	**3561.2**

Source: ACMA

Table 3.7 shows the free to air advertising and license fees dropped in Australia between 2007 and 2009. This trend was also apparent across Asia/Pacific and globally. However, advertising made a strong resurgence in 2010, lifting spending to record highs.

Table 3.7: Free to air advertising and license fees

$A million	2006	2007	2008	2009	2010
Australia	3,208	3,475	3,412	3,151	3,513
Asia/Pacific	41,865	42,267	41,964	39,867	42,197
Global	151,720	154,111	154,489	143,958	155,327

Source: PriceWaterHouse Coopers, 2011, Outlook Australian Entertainment and Media 2011-2015

3.4.3 Subscription television

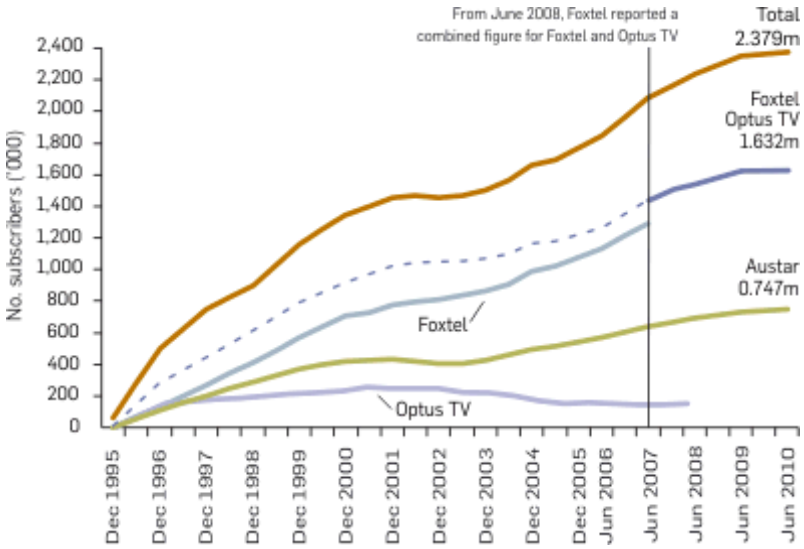
In Australia, there are currently more than 90 English-language television channels available to subscribers of the three major subscription groups. Some 75 of these are unique subscription-only channels, eight are time-shifted subscription-only channels and seven are free-to-air television channels. There is an additional five menu, channel guide and help service channels. Furthermore, there are movie channels offering pay-per-view services, audio services, radio services and two foreign language television services.

The sector has undergone a number of changes in recent years, including the high degree of digitisation and earlier access to movie content. Traditionally content has been offered in strict timing "windows," first to the exhibition sector, then to the retail and rental channel and then to subscription providers. While the exhibition window has been maintained the trend is moving towards allowing content to be provided in the subscription sector at the same time as the retail and rental channels.

The market is currently comprised of two major local operators of subscription television services, Foxtel and Austar. As of June 2008 Foxtel and Optus TV subscriber numbers are reported together because Optus TV features Foxtel packages available only to existing customers and is discontinuing its service. SelecTV was founded in 2005 as a low cost option to subscription television services. However, as of 15 November 2010, SelecTV discontinued its service and Austar has taken over its customer base.

Foxtel had greater than 1.6 million customers in June 2010. Most of these customers were located in urban areas. Austar has a smaller proportion of the total market, but a larger proportion of the regional market with 747,000 subscribers. As of June 2010, the operators had a combined subscription base of 2.4 million. Chart 3.6 shows the significant increase in subscriber numbers since 1995.

Chart 3.6: Subscription television customers



Source: Screen Australia

Table 3.8 shows the proportion of televisions across Australia which have subscription television. In 2010, some 30.9% of television owners had subscription television.

Table 3.8: Subscription television penetration of TV household

	2006	2007	2008	2009	2010
Subscription television penetration	23.1%	25.2%	27.9%	29.4%	30.9%

Source: PriceWaterHouse Coopers, 2011, Outlook Australian Entertainment and Media 2011-2015

Table 3.9 shows the total market for subscription television between 2006 and 2010. The market comprises of consumer spending on subscription television as well as advertising revenue. Consumer spending revenue accounts for approximately 88% of the total market revenue for subscription television.

Table 3.9: Subscription television total market

$A million	2006	2007	2008	2009	2010
Australia	1,689	2,051	2,443	2,661	2,779
Asia/Pacific	23,151	27,187	30,384	33,869	39,207
Global	177,264	194,217	208,720	219,876	236,454

Source: PriceWaterHouse Coopers, 2011, Outlook Australian Entertainment and Media 2011-2015

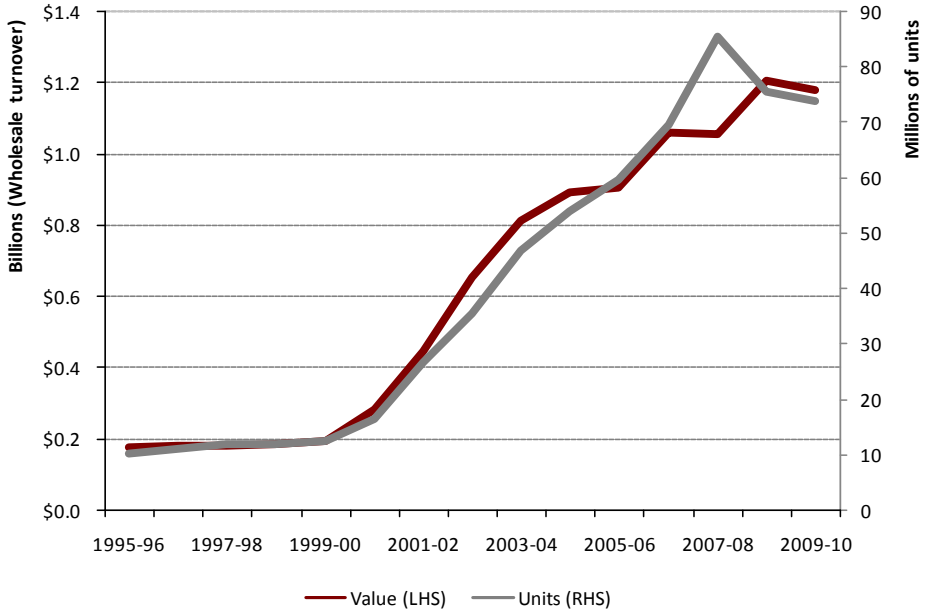
3.5 Retail and rental

This sector comprises of businesses that rent or sell any viewing content that is an output from the production industry. This is generally in the form of DVD/ Blu-Ray for home viewing purposes.

Retail

Chart 3.7 provides an overview of retail sales of DVDs, Blu-Ray, HD, UMD and VHS in Australia since 1995-96. The quantity of sales peaked at over 85 million in 2007-08, while the value of sales was highest the following year. 2009-10 saw sales decline on the previous year, with the total value of sales approximately $1.2 billion.

Chart 3.7: Retail channel wholesale, turnover and units



Source: AVSDA

Note: DVD, BLU RAY, HD, UMD and VHS (all formats) combined

Table 3.10 shows the sell through spending in the home entertainment market. Sell through spending in Australia has grown every year since 2006 and is expected to grow in 2010 also.

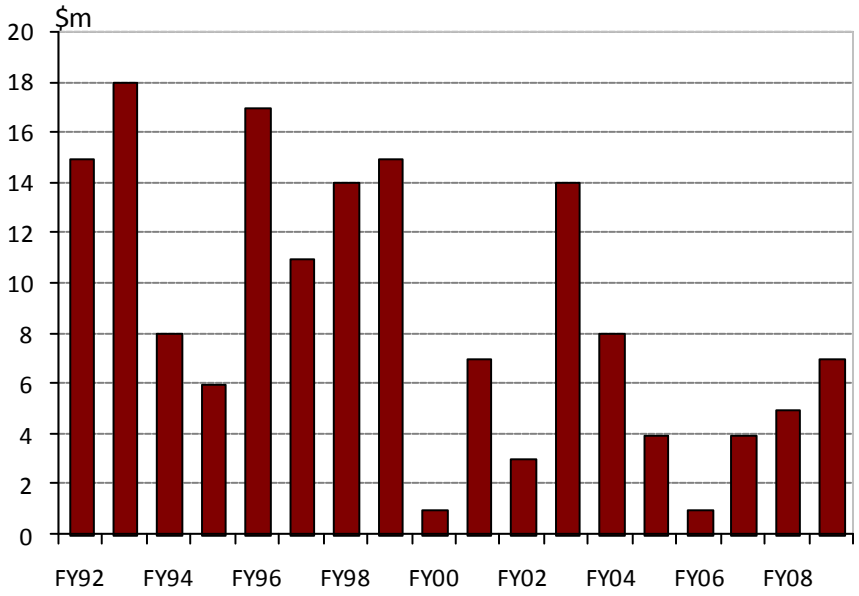
Table 3.10: Sell through spending in the home entertainment market

$A million	2006	2007	2008	2009	2010*
Australia	1,577	1,829	2,107	2,193	2,273
Asia/Pacific	8,241	8,447	8,372	8,434	8,704
Global	56,416	57,076	55,058	53,270	53,862

Source: PriceWaterHouse Coopers, 2011, Outlook Australian Entertainment and Media 2011-2015
*Forecast

Chart 3.8 shows video royalty exports have increased every year since 2005-06. However, the in-store retail market not only faces competition from online retail sales, but also faces format risk concerns, as the war of attrition between Blu-Ray and DVD continues. The sector has quite a low profit margin on retail sales due to high price competition. However, the flow-on effects through sales of merchandise assist industry profitability.

Chart 3.8: Video royalty exports



Source: Screen Australia, ABS

Note: methodology differs from FY92 – FY05 data.

Rental

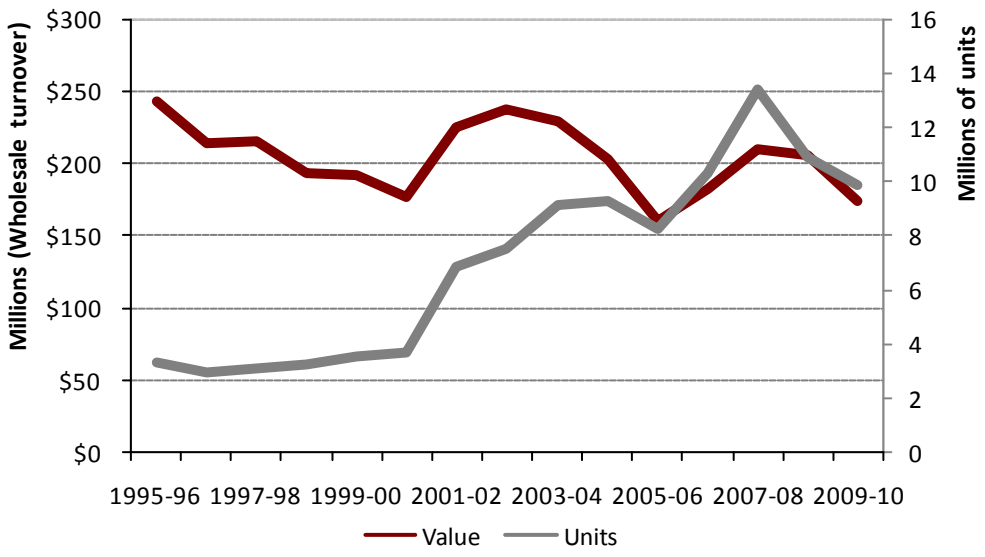
The Australian rental market is comprised of a number of different franchises, small independent operators and a growing online movie subscription market. Blockbuster is the dominant player in the rental market with 305 franchises in Australia as at January 3, 2010.

The online movie subscription market is emerging in Australia, with four firms currently offering online DVD rental services via the internet. Quickflix and BigPond Movies are the two largest players. Initially these businesses allowed the consumer to select a film through an internet portal and a DVD was then posted to the consumer. Once viewed, the film was sent back to the business via return post in an envelope provided. Internationally this business model has evolved so that rentals are now available through a digital download or streaming service. With the advent of new technologies such as Telstra's T-Box, Australian subscribers can now download movies directly to their television. Subscription fees vary according to the number of titles allowed at any one time.

In 2009-10 Quickflix subscribers grew by 68% to more than 55,000, with revenue of $7.12 million and a reported loss of $3.08 million. Currently, Quickflix has 43,000 movie titles available, with 85% watched in any one month.

Chart 3.9 provides an overview of wholesale rental sales of DVDs, Blu-Ray, HD, UMD and VHS in Australia since 1995-96. The value and number of units peaked in 2007-08.

Chart 3.9: Rental channel (wholesale) turnover and units



Source: AVSDA

Note: DVD, BLU RAY, HD, UMD and VHS (all formats) combined

Table 3.11 shows the change in the in-store rental market in Australia, and globally, between 2006 and 2009. The market has grown over this period, with new release sales paving the way. Although demand for in-store rentals may start to experience a decline due to the growth in online video services in future years, demand is expected to grow for 2010.

Table 3.11: In-store rental market

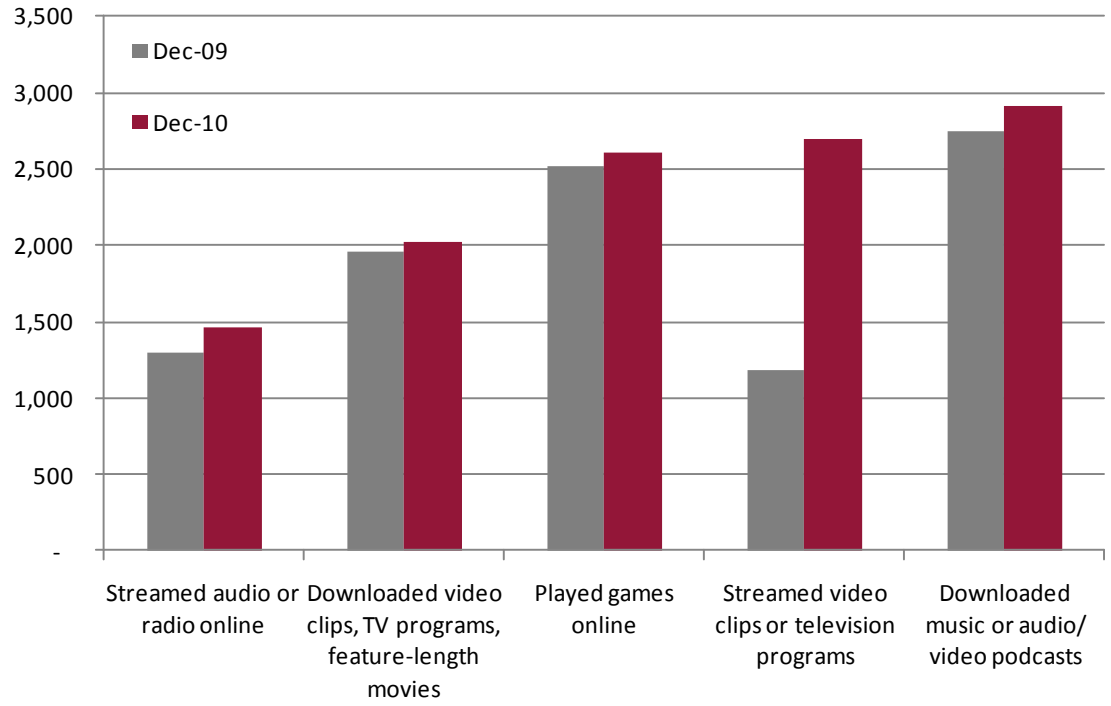
$A million	2006	2007	2008	2009	2010*
Australia	490	492	555	590	618
Asia/Pacific	8,102	8,515	8,707	9,016	9,296
Global	22,890	23,093	22,495	22,998	23,621

Source: PriceWaterHouse Coopers, 2010, Outlook Australian Entertainment and Media 2010-2014
*Forecast

3.6 Online activity

In the past 12 months to December 2010 there has been a steady increase in people accessing entertainment content online, in particular the streaming of radio, downloading of filmed content, online gaming and downloading music, see Chart 3.10. Similarly there was a sharp increase in the number of people accessing streamed video or televisions content in the last 12 months.

Chart 3.10: Number of people* accessing selected digital content activities, December 2009 - 2010



Source: ACMA (2011)
* persons over the age of 14.

From December 2009 to December 2010 the number of people accessing streamed filmed content has increased from approximately 1.2 million to 2.7 million. The number (and growth) is potentially higher as this only includes persons ages 14 years and over.

Given this growth it is not surprising that eight out of the top nine video sites accessed from home are video streaming sites. The most popular site is YouTube with over 5.3 million Australians visiting the site. Other user generated content sites like, Google Video and Metacafe are also popular in Australia.

The ABC's iview, a site that provides a video repository for filmed content, attracted just over 280,000 people. The only for-fee site BigPond Movies attracted 188,000 people.

Table 3.12: Australians visiting selected video sites from home, December 2010

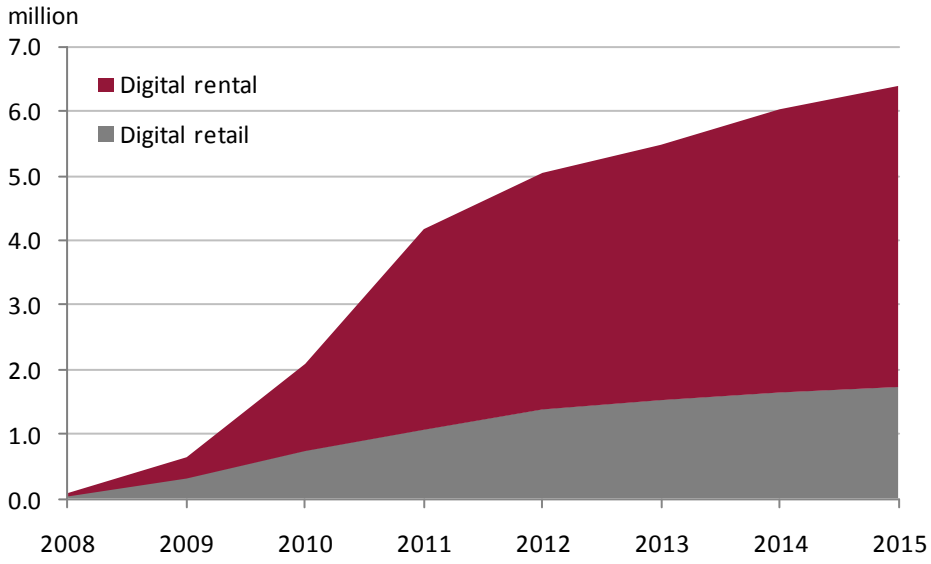
	Number of persons accessing the site ('000)
YouTube	5,326
Google Video	894
Vimeo	350
ABC iview	283
Metacafe	225
Dailymotion	197
NineMSN Video	133
BigPond Movies	188
Bing Videos	118

Source: ACMA (2011)
* Home internet users aged 14 years and over

Online sales

Australian online sales have grown in the Australian market in the last two years. From a base of about 100,000 in 2008 this has grown to about 2.1 million in 2010, see Chart 3.11. In 2010 digital rental transactions stood at about 1.3 million where digital retail accounted for about 0.7 million transactions.

Chart 3.11: Online movie transactions



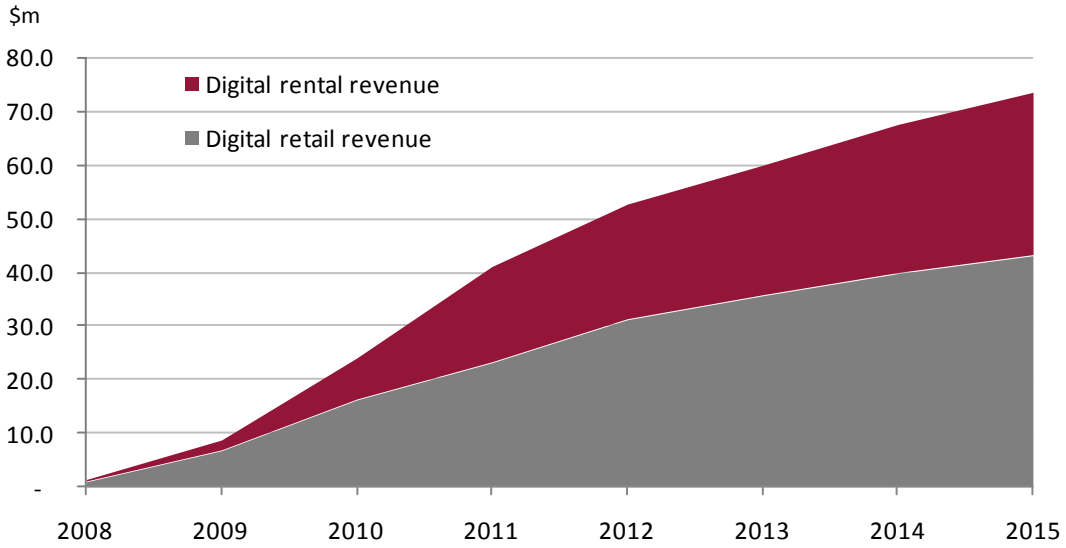
Source: Screen Digest

Both online sectors are slated to grow into the future with Screen Digest projections estimating about 6.4 million transactions by 2015, rental accounting for 4.6 million retail about 1.7 million transactions.

Turnover in the sector paints a similar picture, with high levels of growth in the last couple of years growing from $1.2 million in 2008 to $23.9 million in 2010.

Going forward revenue is set to grow from $23.9 million in 2010 to $73.6 million in 2015, with digital retail accounting for $43.2 million and digital rental $30.3 million. Total 2015 turnover also includes the smaller subscription sector with about $140,000 in turnover.

Chart 3.12: Online movie revenue, 2008 – 2015*



Source: Screen Digest
* in 2010 prices

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Appendix A: Economic contribution studies

Economic contribution studies are intended to quantify measures such as value added, exports, imports and employment associated with a given industry or firm, in a historical reference year. The economic contribution is a measure of the value of production by a firm or industry.

Value added

Value added is the most appropriate measure of an industry's/company's economic contribution to gross domestic product (GDP) at the national level, or gross state product (GSP) at the state level.

The value added of each industry in the value chain can be added without the risk of double counting across industries caused by including the value added by other industries earlier in the production chain.

Other measures, such as total revenue or total exports, may be easier to estimate than value added but they 'double count'. That is, they overstate the contribution of a company to economic activity because they include, for example, the value added by external firms supplying inputs or the value added by other industries.

Measuring the economic contribution

There are several commonly used measures of economic activity, each of which describes a different aspect of an industry's economic contribution:

- **Value added** measures the value of output (ie goods and services) generated by the entity's factors of production (ie labour and capital) as measured in the income to those factors of production. The sum of value added across all entities in the economy equals gross domestic product. Given the relationship to GDP, the value added measure can be thought of as the increased contribution to welfare.

  Value added is the sum of:

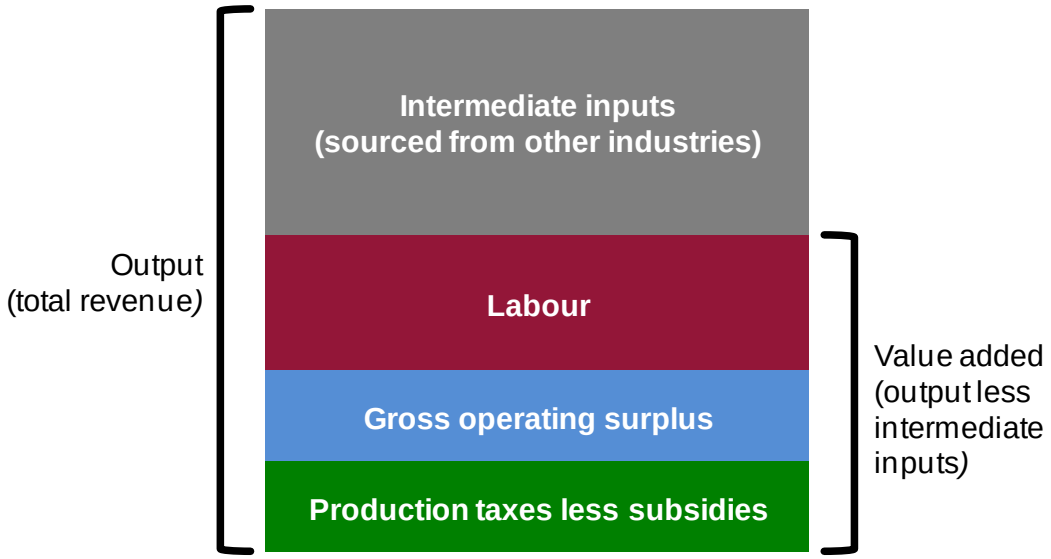
  - Gross operating surplus (GOS). GOS represents the value of income generated by the entity's direct capital inputs, generally measured as the earnings before interest, tax, depreciation and amortisation (EBITDA).
  - Tax on production less subsidy provided for production. This generally includes company taxes and taxes on employment. Note: given the returns to capital before tax (EBITDA) are calculated, company tax is not included or this would double count that tax.
  - Labour income is a subcomponent of value added. It represents the value of output generated by the entity's direct labour inputs, as measured by the income to labour.

- **Gross output** measures the total value of the goods and services supplied by the entity. This is a broader measure than value added because it is an addition to the value added generated by the entity. It also includes the value of intermediate inputs used by the entity that flow from value added generated by other entities.

- **Employment** is a fundamentally different measure of activity to those above. It measures the number of workers that are employed by the entity, rather than the value of the workers' output.

Figure A.1 shows the accounting framework used to evaluate economic activity, along with the components that make up gross output. Gross output is the sum of value added and the value of intermediate inputs. Value added can be calculated directly by summing the payments to the primary factors of production, labour (ie salaries) and capital (ie gross operating surplus, 'GOS', or profit), as well as production taxes less subsidies. The value of intermediate inputs can also be calculated directly by summing up expenses related to non-primary factor inputs.

Figure A.1: Economic activity accounting framework



Source: Access Economics.

Direct and indirect contributions

The **direct** economic contribution is a representation of the flow from labour and capital in the Australian film and television industry.

The **indirect** contribution is a measure of the demand for goods and services produced in other sectors as a result of demand generated by the Australian film and television industry. Estimation of the indirect economic contribution is undertaken in an input-output (IO) framework using Australian Bureau of Statistics input-output tables which report the inputs and outputs of specific sectors of the economy (ABS 2008).

The total economic contribution to the economy is the sum of the direct and indirect economic contributions.

Limitations of economic contribution studies

While describing the geographic origin of production inputs may be a guide to a firm's linkages with the local economy, it should be recognised that these are the type of normal industry linkages that characterise all economic activities.

Unless there is significant unused capacity in the economy (such as unemployed labour) there is only a weak relationship between a firm's economic contribution as measured by value added (or other static aggregates) and the welfare or living standard of the community. Indeed, the use of labour and capital by demand created from the industry comes at an opportunity cost as it may reduce the amount of resources available to spend on other economic activities.

This is not to say that the economic contribution, including employment, is not important. As stated by the Productivity Commission in the context of Australia's gambling industries:[1]

> *Value added, trade and job creation arguments need to be considered in the context of the economy as a whole … income from trade uses real resources, which could have been employed to generate benefits elsewhere. These arguments do not mean that jobs, trade and activity are unimportant in an economy. To the contrary they are critical to people's well-being. However, any particular industry's contribution to these benefits is much smaller than might at first be thought, because substitute industries could produce similar, though not equal gains.*

In a fundamental sense, economic contribution studies are simply historical accounting exercises. No 'what-if', or counterfactual inferences – such as 'what would happen to living standards if the firm disappeared?' – should be drawn from them.

The analysis – as discussed in the report – relies on a national input-output table modelling framework and there are some limitations to this modelling framework. The analysis assumes that goods and services provided to the sector is produced by factors of production that are located completely within the state or region defined and that income flows do not leak to other states.

The IO framework and the derivation of the multipliers also assume that the relevant economic activity takes place within an unconstrained environment. That is, an increase in economic activity in one area of the economy does not increase prices and subsequently crowd out economic activity in another area of the economy. As a result, the modelled total and indirect contribution can be regarded as an upper-bound estimate of the contribution made by the supply of intermediate inputs.

Similarly the IO framework does not account for further flow-on benefits as captured in a more dynamic modelling environment like the CGE model.

Further limitations of the economic contribution by state

The methodology to extrapolate the state contribution may also provide a limitation to the interpretation of the results. The methodology follows the same approach used in the previous economic contribution study of the industry conducted in March 2010. It is based on stratifying the total results on estimated state based FTE employment and assumes a number of factors, including;

[1] Productivity Commission (1999), *Australia's Gambling Industries*, Report No. 10, AusInfo, Canberra, (page 4.19).

- Employment productivity is uniform across the states. This suggests an employee in a regional television station in Canberra is the same as an employee in production in Sydney. This is an important distinction because workers in different sectors may have access to more capital and consequently be more productive, driving higher value added and wages;
- It assumes the employment in the state is a good proxy for value added, output and employment. This may not be the case where the employment in the sector is not the same – or at least similar – to the consumption in that sector; and,
- With regards to the indirect activity, it assumes no trade between the states. Or, the domestically supplied intermediate inputs used by production firms in NSW are sourced from that state.

Also, there were a number of assumptions made to determine the employment by state. This included Pay TV state employment figures at the same proportions to free-to-air television. This is expected to have little impact on the results because Pay TV is only 6% of total employment, but we would expect a higher concentration of employment in the eastern seaboard states.

Input-output analysis

Input-output tables are required to account for the intermediate flows between sectors. These tables measure the direct economic activity of every sector in the economy at the national level. Importantly, these tables allow intermediate inputs to be further broken down by source. These detailed intermediate flows can be used to derive the total change in economic activity associated with a given direct change in activity for a given sector.

A widely used measure of the spill-over of activity from one sector to another is captured by the ratio of the total to direct change in economic activity. The resulting estimate is typically referred to as 'the multiplier'. A multiplier greater than one implies some indirect activity, with higher multipliers indicating relatively larger indirect and total activity flowing from a given level of direct activity. The industry multiplier used for this analysis is the motion picture, radio and television services, as shown in Table A.2

Table A.2: Domestic gross output multiplier for motion picture, radio and television services

	Gross output multiplier
Gross Output	2.28
Value Added	0.84
Labour Income	0.46
Employment	8.16

Source: ABS cat. No. 5209.0, Access Economics

Within the film and television industry there is a high quantity of intra-industry inputs used in making the final product. For example, the production sector provides content to the manufacturers, television companies and distributors. The manufacturing sector provides DVDs etc to the distributors who, inturn, distribute them to retail and rental stores and to exhibitors for household consumption.

This suggests that much of the demand generated by the industry is provided by itself and thus spill-over or indirect contribution is limited to the production sector because it is at the start of the value added chain.

The input-output matrix used for Australia is derived from the Australian Bureau of Statistics Input-Output Tables 2005-06. The industry classification used for input-output tables is based on ANZSIC, with 109 sectors in the modelling framework.

Appendix B: Technical appendix

This appendix discusses how the economic contribution of each sector of the film and television industry was estimated.

Production

Production was measured using ABS (Cat. No. 8679.0) *Television, Film and Video Production and Post-Production services, Australia*. The most recent available data was for year 2006-07.

Access Economics used a growth rate to grow the economic contribution and employment in the production sector from 2006-07 to 2009-10 based on the information in the Screen Australia *Drama Report*. This required us to assume that the whole production sector grows at the same rate as the *Drama Report* defined sector.

The Australian and state governments offer subsidies for the Australian production in the film and television industry. This subsidy is included in the economic analysis.

Table B.1: Economic contribution of the Production sector, $M, 2009-10

	Gross operating surplus	Labour income	subsidy	Value added	Employment (FTE)
Direct	276.0	688.0	111.4	852.6	10,167
Indirect	666.5	337.9		1,004.3	7,971
Total	942.5	1,025.8		1,856.9	18,138

Source: Access Economics estimates.

Television

Similarly the economic activity of the television sector was measured using ABS data from *Television, Film and Video Production and Post-Production services, Australia 2006-07.* This was updated using a growth factor to convert to the 2009-10 contribution. Both the nominal and real growth factor were estimated using PriceWaterHouse Cooper's *Free to air advertising and license fees,* published in PWC's *Australian Entertainment and Media Outlook* 2010-2014.

Based on information from the 2009 Austar Annual Report we have estimated that the subscription TV sector paid corporations tax. The original study – based on ABS estimates of the sector – estimated that the sector ran both an operational profit but a financial loss. The new updated information does not change the operational surplus (used for the national accounts) but it does change the level of tax paid by the sector.

Distribution

The distribution sector was updated reflecting the intermediate inputs demanded in other sectors of the film and television industry. The framework used in the original contribution study remains in place with the intermediate inputs estimated for the 2009-10 update were used to calculate the total turnover in the distribution sector.

Exhibition

The ABS' *Motion Picture Exhibition Australia,* 1999-2000 (Cat. No. 8654.0) was used to estimate the economic and employment contribution of the exhibition sector. These data were updated by using a scaling factor to increase operational expenses and other income factors. This scaling factor was derived by data published by Screen Australia *Overview of the film and exhibition industry,* which provided recent data on the revenue in the exhibition sector.

Retail

The retail sector was the one area in the industry where ABS data was not available. As such Access Economics used sales of DVD and video which was available from GfK Australia as reported by Screen Australia. PWC's *Australian Entertainment and Media Outlook* 2010-2014 was also used to obtain up to date data sales of video products per year and sell through spending per year.

Rental

PWC's *Australian Entertainment and Media Outlook* 2010-2014 also provided information on rental income and this was used to update ABS (Cat. No. 8562.0*) Video Hire Industry*, Australia, 1999-2000.

As with the original report care was taken to ensure we increased each of the income streams in the channel. For instance we held an *a priori* view that rental income may have decreased as a proportion of income to an increase in sales in the channel.